



June 2009

Volume 5, Issue 6

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From The Editor...

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Hello again folks!

Another packed issue! A really nice article from George KK7FM a club member who has moved east and attended the Dayton Hamfest. That begins on page eight.

In addition, a sparkling article from the folks at Acme Research labs. That begins on page sixteen.



Below, We can see another venture from the folks at Acme. Rich Patrick KR7W and Larry KD4VVOM were at the bunny hunt at Ft. Steilacoom park a couple of weekends ago. Rumor has it that another bunny hunt is coming soon!



73 all from Gary WG7X!



Above left is a picture of my XYL Sue at Mt. Rushmore. That is quite a place and a heartily recommended place to visit for every American. It is a great example of Americana. Highly recommended by the WG7X family!

A Jot from Jill.....



Greetings from your Prez.

We are already leaving May behind us and hopefully most of the showers along with it. The recent sunshine has been a breath of fresh air. I know each of you have been taking advantage of it and find yourselves working in your

yard, garden and on that endless "honey do" list. Frank, AC7JY, my honey, has been slaving away trying to make a new lawn as well as shoveling dirt for a sidewalk.

There are so many ham activities all around us so don't forget to take time and have a QSO with your friends. I hope some of you make it to the SEAPAK Ham convention in Seaside, Oregon, June 5-7. Please reserve your calendar for the 2nd Saturday in June for the Annual Kirkreit Picnic held at Spanaway Park. It always promises great BBQ with all the fixings and all you can eat potato salad!

A huge thank you to Casey, WYTV for stepping up and being willing to be Chairman for Field Day this year on short notice. Bob, AD7LJ got things started but had some other responsibilities come his way. Casey is still looking for lots of help but has assured us that no matter what, the goal is to have lots of fun. Field Day is June 27th and 28th this year at Western State Hospital which will be the 3rd year in that location. If you would like to help in any way, whether it be setting up, taking down, running a station or taking a turn on a band, give Casey a phone call or email. You are also invited to just stop by and pay us a visit. We would like to see you one way or another and make you feel welcome. You can also bring an RV or tent and spend the night.

We have had some great programs lately and I want to thank each one who has donated their time to bring their ideas to the meetings and share them with the rest of us. Please let Ken Gibson, N7ELF know if you have something you would like to share for a program in the future.

Last but not least, swing by the clubhouse on a Saturday and enjoy a donut and coffee, make a contact on the radio upstairs, or just hang out for awhile. **PLEASE**, if you see someone new visiting or just learning to be a ham, welcome them to the clubhouse and show them around. Make it an inviting place for **everyone!**

Have a fabulous month of June and please don't hesitate to write me an email, send a note or just call me. I'd be happy to hear what you have to say.

Jill K7Jil, Radio Club of Tacoma President



Radio Club of Tacoma

Board Meeting May 6th, 2009

The 6 May 2009 Radio Club of Tacoma Board meeting was held at the Radio Club of Tacoma. President Jill Palmer K7JIL called the meeting to order at 7:00 PM.

Officers and board members present:

President: Jill Palmer – K7JIL
Vice President: Rick Rose – KE7EMW
Secretary: Larry Watson -- KD4VOM
Treasurer: Joe Lester K7AWJ
Board Member: Frank Palmer – AC7JY
Board Member: Al Burleson – K7HW
Board Member: Gary McAdams – WG7X
Board Member: Harry Adams – W7HSA

A sign in sheet with the names of members and guests is attached. There were 14 names on the attendance roster

HEALTH AND WELFARE: There were no reports of illness or Silent Key

SECRETARY'S REPORT: Larry Watson – KD4VOM

Minutes from the 1 April 2009 board meeting were approved as coordinated/corrected by e-mail.

TREASURER'S REPORT: Joe Lester K7AWJ

A copy of the Monthly financial statement is attached. Rick KE7EMW pointed out that slightly over four thousand dollars of our current checking balance is committed Salmon Run money.

COMMITTEE REPORTS:

Membership: Rick Rose KE7EMW Reports the current membership stands at 313.

Hamfest: Larry KD4VOM reports that Hamfest Planning is on track, and that Rick KE7EMW and Al K7HW are planning to attend the Stanwood Hamfest this weekend and distribute flyers to promote our fall Hamfest. Steve AD7VL noted that his neighbor's pallet jack which was damaged when it was loaned out to someone else since last year's Hamfest is awaiting repair in order to be used again this year.

Logger's Bark June, 2009

UNFINISHED BUSINESS:

Furnace Repair: Efforts to locate a suitable furnace replacement continue.

Lawn Maintenance: There was considerable discussion on how to replace our aging lawnmower. Issues of buying locally, purchasing new, using Craig's List, Mower and engine type and features and various cost limit authorizations were addressed. Several motions were made, seconded, and then withdrawn after further discussion. In the end, a ***Motion was Made, Seconded and Passed to authorize the transfer of \$800 to the IRT Account and authorize/charge the IRT Team with responsibility to procure a suitable riding lawnmower, using whatever qualified technical resources the club possesses.***

Alarm System: Rick KE7EMW provided and updated statement of the cost estimates based on Rich KR7W's work and initial list. The expected expenses include \$ 607.62 for the Alarm Kit and accessories, \$200 for wire, \$80.00 for toroids, a 15% estimate variation factor of \$ 133.14 for an estimated total cost of \$ 1020.76. **A motion was made, seconded and passed to authorize up to \$1,500.00 for purchase of the alarm system by the Internet Resources Team and the funds to be transferred to the IRT Account for the purchase.**

Salmon Run Fundraiser: Al N7OMS is giving up the reins of the Salmon Run Fundraiser this year after two successful drives which funded our new roof and windows the first year and is slated to fund the upcoming furnace replacement, updated security alarm system, and a replacement lawnmower this year. Harry Adams W7HSA has agreed to take the Salmon Run Pledge Fundraiser Lead.

Clubhouse Spring Cleanup: Al N7OMS observed that while we did accomplish a fair amount at the initial 9 March session, the weather has hampered our plans to do more of the outside work, specifically preparing the window frames and other woodwork for repainting. When the weather permits, we should return to this task. Meanwhile there remains a long list of clubhouse projects requiring our attention.

Equipment Loan Policy: – Not addressed

NEW BUSINESS

Puyallup Fair: Pat WT7N has received the notice for this year's Puyallup Fair Booth which runs from September 11th through the 27th. She asked if the Board wishes to do the booth again this year. The Board agreed to continue our Fair Booth, and Pat will return the notice to the Fair. Pat announced that this is her last year to manage the Puyallup Fair Booth, and recommended someone work with her this year to learn the ropes in preparation for future years. Pat noted that the large amount of materials and gear used for our booth and which has been stored at her home will have to be located somewhere else at the end of this year's fair.

King Davis KE7ASO Estate: Rick KE7EMW reviewed the series of e-mails resulting from King Davis' XYL Carol's request for assistance in handling and disposing of King's amateur radio gear, including a recent message from Carol who seems ready to use a Hamfest vendor table to manage the sale of King's gear if she can get assistance with approximate pricing. The club has offered our assistance in inventorying, tagging and providing a high and low price estimate to assist Carol in her in the sale of King's gear. It was pointed out that any member of the club participating in the inventory and pricing of King's gear would ethically be prohibited from promoting his or her personal interests in the purchase of any item. This would not preclude anyone from negotiating a sale agreement at the Hamfest Vendor table should that be the way Carol elects to go.

If our proposal is acceptable to Carol, a team of qualified and experienced club members will be asked to provide the inventory and pricing assistance

Field Day: There was a discussion of the Club's Field day plans. At this point we have no manager, and there are several alternative options which have been discussed. We are already late in planning, and need action soon if we are to have a Field Day at all.

The Planning Team provided a Strawman list of past participants in recent Field Day's and recommended a meeting of that group (and any others who may have an interest in participating) to address the issues and options, seek a manager, and get recommendations on how the Club might proceed. Jill - K7JIL will contact the members on this list individually and conduct the meeting. Once the date/time has been co-

ordinated with these past participants, an email will be sent to all club members so that others can attend.

Tube Inventory: Al N7OMS and his team have completed the first round of our tube inventory which has yielded over 30 boxes. We are awaiting the formation of the Property Selection Team to make recommendations to the board on what tubes should be retained for Club use, and what tubes should be sold or auctioned off to raise funds.

A parallel issue exists in the lack of secure storage space. There is a recommendation that the two equipment cabinets now in storage be disposed of. Larry KD4VOM asked for and received approval to temporarily move the equipment cabinets to his QTH for storage until the decision is made on their disposal.

Board Attendance: There was a discussion on the issue of Board member attendance at Board meetings. KE7EMW was asked to look into the issue.

TV Converter Box: Rick KE7EMW is in possession of a TV converter box coupon donated by Harry W7HSA. Rick wants to use the coupon to purchase a converter for the Clubhouse TV, and would like to also get an antenna for it. ***A Motion was Made, Seconded and passed to approve the expenditure of up to \$ 20.00 to purchase a converter box using the coupon.***

HF Station Ten Tec: Gary WG7X reports the safe return of our repaired and upgraded Ten Tec HF Radio. The cost was \$323.90 which included shipping and taxes.

DISCUSSION TOPICS: -- Larry KD4VOM solicited volunteers for vacant Open House Duty Officer for May and June.

ANNOUNCEMENTS:

Extra Class: Harry W7HSA reminded all of the Extra Class training course starting June 1st at 7:00 pm. He has seven signed up, and Steve AD7AB is doing the first class session. Harry is looking for instructors to help. Please contact Harry if you can assist.

The meeting was adjourned at 8:36 pm

Radio Club of Tacoma

General Meeting 13 May 2009 MINUTES

The 13 May 2009 Monthly Membership meeting was held at the Pierce County Library Administration Building. . President Jill Palmer K7JIL called the meeting to order at 7:31 PM.

Officers and board members present:

President: Jill Palmer – K7JIL

Vice President: Rick Rose – KE7EMW

Board Member: Frank Palmer – AC7JY

Board Member: Harry Adams – W7HSA

A sign in sheet with the names of members and guests is attached.

PLEDGE OF ALLEGIANCE: Was led by President Jill K7JIL

INTRODUCTIONS:

Self introductions were completed and guests welcomed. Maury's New call is W7OT...

ILLNESS OR SILENT KEY: None reported

SECRETARY'S REPORT: Correspondence reported by Rick – KE7EMW

TREASURER'S REPORT: No report

COMMITTEE REPORTS:

Membership: Rick Rose KE7EMW – We now have 314 members. Hadassah Rose has become our newest member.

VE Report: Harry – W7HSA reported on the recent VE session.

Field Day: Field Day preparations are a bit behind schedule. The Club needs a Field Day Chairman, and Casey –WYTV stepped up and will manage Field Day for us. There will be an organization and planning meeting for Field Day next Wednesday 20 May at 7:30 pm at the clubhouse.

PROGRAM: Tonight's program "Contesting University" Part I was presented by former Club President Doug Smith W7ZZ and John Pitts W7RG. Once the projection and laptop issues were resolved, the program addressed the basics of what contesting is all about, and the world of "Radio Sport" which has developed its own set of protocols and system to facilitate sportsman like conduct of a very competitive amateur radio activity.

Logger's Bark June, 2009

ANNOUNCEMENTS:

Extra Class: Harry – W7HSA reports that the upcoming Extra Class course is on track and will begin June 1st at 7 PM at the Clubhouse. The first session: "Radio Modes and Equipment"

Mother's Day Breakfast: Jill – K7JIL reminded all of the upcoming and annual Mother's Day Breakfast at the Clubhouse on Sunday, 17 May from 9 am to noon.

Annual Picnic: The annual Kirkreit Picnic will be held again at Spanaway Park this coming June 13th, same shelter as last year, Flyers will be available at the next meeting.

Salmon Run: Harry – W7HSA will manage this year's Salmon Run Fundraiser.

DOOR PRIZES: were won by Ollie AD7CC; Bob AD7WU; Harry W7HSA and Bruce AD7WV

The meeting was adjourned at 9:02 pm

General Meeting Minutes 27 May 2009 MINUTES

The 27 May 2009 Monthly Membership meeting was held at the Pierce County Library Administration Building. . President Jill Palmer K7JIL called the meeting to order at 7:30 PM.

Officers and board members present:

President: Jill Palmer – K7JIL

Vice President: Rick Rose – KE7EMW

Secretary: Larry Watson -- KD4VOM

Treasurer: Joe Lester K7AWJ

Board Member: Frank Palmer – AC7JY

A sign in sheet with the names of members and guests is attached. There were 43 names on the attendance roster.

PLEDGE OF ALLEGIANCE: Was led by President Jill – K7JIL

INTRODUCTIONS:

Self introductions were completed and guests welcomed. Newly licensed Brian Mackan KF7CRC was welcomed.

ILLNESS OR SILENT KEY: Jill – K7JIL reported our recent Silent Key Lee Meyers, W6PZF long time club member with a membership number of 263. Lee passed away last Friday, May 22nd.

SECRETARY'S REPORT: Larry Watson – KD4VOM

Larry reported the usual utility bills and bank statements as well as the Club's Annual State Corporation Report.

Jill – K7JIL reviewed the calendar and upcoming events.

TREASURER'S REPORT: Joe Lester K7AWJ

Financial information is available on request.

COMMITTEE REPORTS:

Membership: Rick Rose – KE7EMW reports that our membership stands at 313 down one due to the recent SK.

Field Day/Call: Casey – WYTV reported on the recent Field Day planning meeting and our efforts to get ready for this year's event which may be smaller, but oriented to having fun. Lots of help is needed. If you can help with a station, setup, operating, shelter or gear, or any other helping hand, please contact Casey at 253-278-1898

Annual Picnic: Larry – KD4VOM announced the upcoming annual Kirkreit Picnic which will be held again at Spanaway Park on Saturday, 13 June at 11:30 am. Bring your favorite picnic food/dish, and the club will provide the dogs, fixing's and refreshments.

ANNOUNCEMENTS:

Mother's Day Breakfast: Frank AC7JY reported on the recent and successful annual Mothers day breakfast, Frank – AC7JY flipped pancakes while Bob--AD7LJ handled omelets to order. Along with lots of help the crowd enjoyed a nice breakfast.

Washington State Jamboree (Washjam): Steve AD7VL announced RCT participation in the Boy Scouts this August 20-23, 2009 at Ft. Lewis, near Tacoma, WA.

PROGRAM: Doug Smith W7ZZ delivered tonight's program: **Contesting University Part II**. This time without the technical difficulties experienced at the last meeting. This smooth and professional presentation addressed key topics on the fine art of amateur radio contesting; ranging from ergonomics to software tools, developing a battle plan, logging and report-

ing.

TUNING AND TRAFFIC:

First Contact Award: Rick – KE7EMW presented the ARRL's first contact award to Brian Mackan – KF7CRC who made his very first contact with Rick on 24 May, Congratulations Brian and welcome to a great hobby.

There were several reports of improving band activity, 10 and 20 meters including contacts with Calgary, the Azores and others.

10 Meter Net: Lynn K7OKS reports he cannot be the control operator for this Sunday's 10 Meter net.

DOOR PRIZE: The Pencil Torch door prize was won by Susan Schooler – KE7SPS

The meeting was adjourned at 9:15 pm

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THE SUPER BAND SPREAD RGH

Uses 1/2a7, 1/57, 1/58, 1/2a5, 1/80.
A powerful adjustable *band spread* superheterodyne kit on the famous gothic chassis. Tremendous power on all signals. Covers entire band from 11 meters up.

COMPLETE PARTS \$14.95
Including 8 S.W. Coils.
Dynamic Speaker \$2.50 extra.

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167 Greenwich St., New York City
SEND FOR FREE DATA

VE REPORT John AC7WW

On Tuesday May 12th five candidates and thirteen Volunteer Examiners gathered at the Radio Club of Tacoma clubhouse. Nine elements were graded and passed. Three new Technician class Amateurs joined the ranks, one candidate passed Technician and General and one candidate upgraded to Extra.

The next scheduled testing session at the Radio Club of Tacoma clubhouse will be Tuesday June 9th.

Thanks to the following VE's for their time and effort:

Harry, W7HSA	Joe, W7RQ
Al, AC7BU	Jon, AD7AW
Rich, KK7VH	Casey, WY7V
Jim, N7RHX	Stephen, AD7AB
Bob, AD7LJ	Mike, AD7TH
David, AD7BK	Bill, AD7QI

Saturday, May 23rd, three Volunteer Examiners traveled to the LDS Church in Key Center. We had a large crowd of three candidates to be tested.

Four elements were graded with three being passed. One candidate passed the Technician and went on to pass the General. Another candidate passed the General and one candidate failed to upgrade.

Thanks to the following VE's for their time and effort on a Holliday weekend.

Casey, WY7V	Rich, KK7VH
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Saturday, May 30th, four Volunteer Examiners made the trip to the LDS Church in Puyallup. Once again a small number of candidates. Six candidates passed the Technician exam.

Thanks to the following VE's for their time and effort.

Jon, AD7AW	Bud, KE7GB
Bob, AD7LJ	Casey, WY7V



Dayton 2009
George Noble KK7FM

I have just returned from the long drive from Dayton Ohio to Des Moines, IA. I spent a very stimulating four days at the famous Dayton Hamvention, and thought perhaps this would be fun to share with friends in the Pacific Northwest for whom the trip to Dayton is more unreasonable than the eleven hour drive I made. I left Tacoma about five years ago. Three years ago I had the opportunity to make a side trip, as part of a much larger professional trip, to go to Dayton for my first visit. I had so much fun that time that I had to return the last two years and each time it has proven worth the effort to make the time in my schedule.

Dayton, of course, is the granddaddy of all hamfests. I had read about it many times. The accounts are either exuberant or negative. On my first trip, I really was not sure what to expect. Each year that I have gone, I have gone for "Four Days in May", which is run by the QRP group, ARCI. The four days includes an all-day seminar on Thursday, with talks about QRP construction and techniques, followed by the Hamvention itself, which runs Friday, Saturday, and Sunday. At the QRP event, on Thursday and Friday evenings, there are vendor and show-and-tell events, and Saturday night there is a banquet with awards.

Thursday consisted of a whole day of seminars beginning at 8:00 in the morning. First off was Ed Hare, W1RFI, who spoke on test equipment and methods. He is the technical guru with ARRL. He gave an extremely entertaining talk which was also a somewhat educational. Following him was Dave Cripe, NM0S, who talked about class E amplifiers for QRP. He made the point that, in this era of energy conservation, we should be looking for ways to minimize power usage by our ham radio stations and class E amplifiers allow for a much more efficient use of power supplies. He spoke specifically about military radiomen that have to carry a heavy load in battery packs, not to mention the heat an inefficient amplifier generates. After a coffee break, George Dobbs G3RJV, gave a rambling presentation about his long career in QRP radio. He is a retired pastor from England, who is a regular in QRP events here at Dayton. He is always an entertaining speaker and throws in some humor and philosophy in each of his talks. It's hard to boil down the essence of his philosophy, but I'll try. Essentially he was telling us that it's okay to be a geek— that time spent struggling to build small radios or to make contacts with minimal power is well spent, even though, to an outside observer, it doesn't appear to be "constructive". Most interesting for me was part of his talk where he discussed earlier efforts to involve young people in ham radio. After lunch, Jan Verduyn, G0BBL, gave a very erudite talk on soft rock radio developments. The Soft Rock is a simple software-defined radio which has generated much excitement, in part, because it has been developed as an inexpensive kit. Next up, was Rick Campbell, KK7B, from Portland, whose talk was titled, "Sustainable, low-power radio". By sustainable, he was not really talking about green energy; but instead referred to things that last. His premise was that the best ham radios should be things which are as valid years from now as they are today, and things which can be shared by a grandfather, father, and son. I was particularly impressed by this philosophical approach, but also by his good humor. In his real life, he designs microwave antennas. He started his talk apologizing in case he should make disparaging remarks about computers, and then he managed to pepper his talk with disparaging remarks approximately every 5 minutes. The last talk of the day was by Oleg Borodin, RV3GM, who spoke about QRP in Russia. He speaks very little English and struggled to give his talk in English, but it was warmly received. Most memorable in this was his discussion of an event in Russia, which loosely translates to "Red Nose", and is the equivalent of our F.Y.B.O. Later in the evening, the conference room was reopened for a for an informal meet and greet with the presenters, at which there was also a number of vendors of small parts and small kits of interest to QRPers.

The vendor nights were fun. This is an opportunity to pick up parts or small kits from people who packaged the parts and circuit boards out of love for the hobby. In some cases there is just simply not enough profit in it for them to exhibit at the main Hamvention. Some vendors are more business-like, but still, it is nice to be able to get closer to the source and not have to hunt around in the flea market for them. There was one kit I wanted to get but the vendor was out. He said he would have more at the flea market the next day. I never found him out there despite many miles of walking up and down the aisles. There were some nicely made portable antennas and some small radio kits. There were some very elaborate keys and some that were simpler. There were also some publications from publishers out of the mainstream. More than anything, this is a wonderful opportunity to get up close to the people producing these items to learn more about what they do and why they do it.

Friday morning, up bright and early, it was time to go to the Hara arena. This is been the site of the Hamvention for many years. This is a structure that has definitely seen better days. The arena itself looks like a hockey rink with the plenty of spectator seating, but under the same set of roofs, there are another three or four spaces of equal or larger square footage. For comparison, this is about six to eight times the amount of enclosed space I remember at Sea-Pac. Also under the same roof there are four good-sized seminar rooms and space given over to the sale and consumption of overpriced under nutritious food. The indoor space is largely occupied by new equipment manufacturers, serious retailers, and organizations, both large and small. The ARRL occupies a large corner of one of these spaces. If all of this is not enough overwhelm one completely, there's a flea market outside. All available parking for the arena is used for this flea market. Parking is at an abandoned shopping center a mile and a half away or in a very muddy field across the road. In my trips to Dayton, I have never systematically explored the outside market. To be sure, I have made brief forays into the outdoor flea market, always leaving a trail of breadcrumbs to help me find my way back to civilization. Most of the outdoor vendors come with some protection from the weather because it is well known that scheduling the Hamvention on a given date guarantees some precipitation in Dayton at that time. There is absolutely nothing one can imagine, related to radio, that cannot be found in his flea market, and there is a good amount of stuff one can't imagine, out there too. Friends from Des Moines can be found at the bottom of a very tall mast flying an Iowa State flag with a flashing light at the top.

When I go to a hamfest, I am looking for an education. I am always pleased when there are good, seminars, pitched at a level that stimulates me without completely overwhelming me. Unfortunately, it often occurs that two or three of the ones I most want to hear are occurring at the same time. The first talk I attended was on ham station engineering manuals. The gist of this talk was that, as our equipment becomes increasingly complex, it makes sense to maintain a notebook, which documents technical details of the setup so that if for some reason, one has to reorganize the ham shack, re-setting up the equipment will not take as long as it did the first time. This was a very practical and interesting talk. From there I went to, a very large session on D-star radios. We are currently in the process of setting up a D-star system in Des Moines, Iowa, and it was interesting to hear what's being done by the people who have been working at it for much longer. I don't think it is reasonable to take up much of this article to discuss the fine points of D-star, but it has a lot of interesting directions we can go in ham radio. Next I happened upon a short session by Gordon West, who was talking about many ways to demonstrate ham radio to help teach and keep people interested. He also emphasized the importance of bringing youth into ham radio. This was very entertaining, and as I say, I wandered in, almost by accident, mostly because two other sessions that had interested me, one on antennas and the other on software defined radios, were already well underway when I left the D-star talk.

Last year, I sat in on the ARRL technical forum for an hour. Apparently, the ARRL had decided to

make technology a focus for the Ham community. There were several excellent speakers. One asked several provocative questions. Noting that a large segment of the Ham community is my age or older (62) and first became fascinated with radio in the 10 to 14 year old age group, he challenged us to think about what it was about ourselves at that age, and about radio, that created this affinity. Fast forward to 2008, he asked what we thought might interest a 10 to 14-year-old about radio today. What might we offer kids today that would be as exciting for them as radio was for us so long ago? Interestingly, the speaker at the forum for teachers that I attended earlier had, in some respects, addressed this question. He had commented that his experience with elementary school children was not what he had expected. He found no interest in PSK and other keyboard techniques, and he speculated that they are all already facile with computers and find no interest there. However, the school children seemed fascinated by Morse code. What do you know? He also challenged his listeners to engage kids and find out what else might interest them. Back at the technical forum, a speaker suggested that many of us were excited by the new technology of radio. Many mastered that technology, but have become complacent in the technology of the 50s. He suggested the hobby could be reinvigorated by returning to the excitement of exploring new technology. He challenged us to get together with our friends and try to identify several problems that need to be solved, and then begin to solve them. He commented that this approach need not necessarily be solely technical. He cited the example of Hams being increasingly afflicted by covenants and restrictions or similar impediments to operating at home. I enjoyed his challenges, and I think that the RCT might be a great forum to explore some of these questions.

The education continues out in the exhibits and flea market, where I like to ask, "What is that?" or, "How does that work?" Last year, I spent some time at a D-Star users group booth trying to learn what the excitement about D-star is, and I ended up buying a new I-Com handheld with D-star capability, although I'm not sure I approve of a system that includes at least one proprietary piece. At least the D-star system itself is open standard (developed by the JARL). The hottest stuff out there, at least in the last two years, is the software defined radio. Flex-radio is a company which has made a commercial go of it by further developing a project first presented in QEX, I believe, several years ago. Two years ago, it was a small box with a very sophisticated transceiver that only put out about 1 W. Today, it is a very much more impressive 100 W radio, which is correspondingly more expensive. Until you watch one of these guys playing with the radio. You don't begin to think of all the possibilities. As one person put it in the seminar, the early development of the automobile was hindered in part by people's conception of a "horseless carriage". If you still think of radio as having knobs and dials, you aren't driving a Porsche (figuratively). A very high end software defined radio is being developed by TAPR. This is available in a series of modules some of which can be built as kits. In the development of this project, they laid new legal groundwork in developing open source hardware. This is apparently a legal concept that did not previously exist. There is also a kit for a "Soft Rock" radio, which is a slightly less sophisticated software defined radio, but very much more build able for the likes of me.

Back in the exhibits, there were a number of antennas, of course. I was able to see in person for the first time, a Hex Beam antenna, which has interested me for some time. This is a lightweight directional antenna that looks a little like my mother's rotating clothesline in the backyard. I-Com, Yaesu, Kenwood, and Ten-Tec all have magnificent booths, as you might expect. It's always fun to twiddle the dials, but I didn't spend much time there. I spent some time at the Begali booth. Begali makes keys that are mechanical as well as artistic masterpieces. But what most occupied my attention there was the CW machine, which is so much more than a keyer. Ulrich, its creator, tells me that he programs in the front page of the New York Times, and then listens to it in code as he drives his car to work. It was almost impossible to get into the Elecraft booth. There was always an eager crowd surrounding the new K-3. There was a booth advertising "leisure dxpeditions" (but showing video of Peter I Island). I visited the Amsat booth hoping to boost my meager understanding of satellites. Across the way was TAPR exhibiting its many projects including their Software Defined Radio. The

ARRL occupies a large space indoors. In it, there are number of sub booths dealing with such things as "the Big Project" (education), legislative advocacy, Scouting and ham radio, DXCC QSL checking, and the new PR 101 course. There was also a large area of ARRL books for sale, and an area where one could purchase one of two simple kits and be taught to solder and assemble the kits. These are the places where I chose to spend time. There are many other booths relating to aspects of ham radio that are less interesting to me. As I said earlier, if you can imagine it, it's there.

As always, one of the best things about any hamfest is the people you meet there. I really enjoyed getting to know Ulrich of the CW machine, and also Rex, from Maine, who, several years ago, bought a used canning machine, and now produces Tuna Tin II kits, actually in a tuna can, with some very clever labeling (it says the content of the can is devoid of any nutritional benefit).

By Sunday morning, many of the outside stalls are abandoned and some of the inside ones as well. Because of the long drive home, I didn't stay to the bitter end to see if I won the grand prize, but I certainly hadn't won any of the hourly door prizes up to that time. (I cannot imagine how, with so many prizes, I could have failed to win one!) On the way home, I listen to 146.520 simplex to hear others' chatter about their experience. I am way too lazy to program in all the repeaters I will pass along the way. I dream of all the things I will have accomplish in Ham Radio by this time next year—and then recall the many similar dreams from last year that are as yet unfulfilled.

I am afraid these ramblings fail to convey the magnitude and scope of the Dayton Hamvention. If you should ever have the opportunity to attend, I think every ham deserves to make this pilgrimage at least once in his lifetime.

73 de KK7FM, George Noble



Dateline: June 2009

Sparky's "View from the Shack"

This and that around the club, and more...

Sparky's welcomes comments, ideas and letters to "The RCT View", but reserves the right to procrastinate, and generally ignore social engineering or cranky inputs. Editorial philosophy — While there occasionally may be reason and rhyme as we go along, the goal is to ramble through the many and varied activities of the Club and its members as we take another trip around the sun.

- Our Legacy...
- Bunny Hunting, The Report
- Field Day Commeth
- View from the Shack

Our Legacy

Sparky continues our trip down memory lane, with the help of some of the many Radio Club of Tacoma historical photos and documents. Here's a couple that show club members were willing to pitch in and help when our home was looking a bit dowdy...



Bunny Hunting, the Report

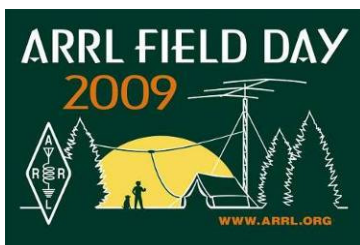
Ft Steilacoom Park was very busy on May 9th as Rich KR7W, and his intrepid team of hidere and findere gathered to demonstrate their craftiness in hiding and skill in finding the hidden transmitters. The Steilacoom park proves a really good location with plenty of hiding places and some rather steep hills to make it a bit more challenging. Despite the Civil War Reenactment activities using our originally planned start location, the hunt went off smoothly. WG7X arrived early and helped Rich deploy the transmitters, and for the rest of this picture - perfect day, others came and went, trying their hand at Amateur Radio Direction finding. Many found that pesky rabbit, but no one found the elusive Elmer Fudd... We'll be seeing them again at this year's annual picnic June 13th.



W7DK Field Day commeth

Late breaking news... Casey Hicks WY7V has volunteered to get our Field Day act together. We'll be at the same Western State Hospital location as the last two years, just off of Ft Steilacoom drive. Casey needs your help, If you can field a station and a team, or provide some able hands, or just want to operate please contact Casey at 253-278-1898, or catch her at the next meeting.

Here's some shots from last year's event...





Attaboys:

Mother's day went smoothly according to Frank AC7JY. With Frank tossing the pancakes and Bob AD7LJ turning out omelets to order the sizeable crowd enjoyed yet another Radio Club of Tacoma tradition in style. Sparky couldn't find any photos for the BARK, so just imagine all those smiling faces and grins...

Doug Smith — W7ZZ's recent two part Contesting Academy was well received and drew good crowds at both May membership meetings. Thanks Doug.

View from the Shack...

The annual Kirkreit Picnic site is on track for 13 June at the Spanaway Park shelter D. Come, bring the family and your favorite picnic dish, potato salad or whatever and the Club will provide the dogs, buns, fixings and refreshments.

Sparky

"Strike while the bug is close"

The Disclaimer...

These articles are intended to browse through recent activities and coming events of possible interest to the Radio Club of Tacoma members. It will of course by design and intent be informal and attempt to record some of the Club's activities that might otherwise go unnoticed



DK at the Fair Returns for 2009

by Pat WT7N

For the newer folks in the club who may not know... RCT operates a booth at the Western Washington Fair to get passer-bys interested in amateur radio. The ham in the booth answers questions, hands out various info, shows off the equipment, and sometimes gives a demonstration of Morse Code.

It's now time to think about volunteering for a shift or two at the Radio Club of Tacoma's booth at the Puyallup Fair. The fair runs from September 11-27 this year. The amateur radio booth is located in the Hobby Hall and the building hours are 10am-10pm Sunday-Thursday, and 10am-11pm Friday and Saturday. Beginning this year, we have the option to leave at 9pm.

We will have 3 shifts per day with 2 people per shift. The shifts will be: 10am-2pm, 2pm-6pm, and 6pm-10pm, Sunday through Thursday. Friday and Saturday will be 10am-2pm, 2pm-6pm, and 6pm-11pm (with option to leave early).

As in the past, volunteers receive free admission to the fair as well as free parking in the employee parking lot. The shift schedule will be available on the www.w7dk.org website in the near future.

You can contact me with questions or requests at pwingertex@harbomet.com or phone 253-274-8657.

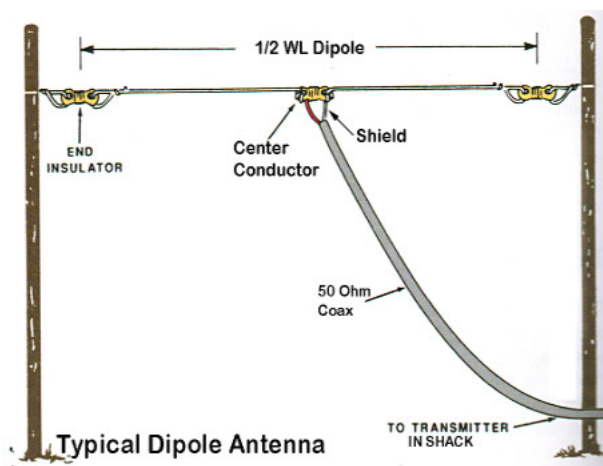


Koyaanisqatsi

by Rich KR7W

Koyaanisqatsi (Ko-YAWN-is-SCOTS-ee) is a Hopi Indian term that loosely translates to "out of balance." As amateur radio hobby enthusiasts we should know and care about Koyaanisqatsi especially in our feed lines and antennas.

The Typical Dipole Antenna illustration shows the basic dipole diagram in the Tech and General class licensing manuals. This self resonant dipole's elements (the two poles) are connected to the coax center conductor and shield



at the antenna end and to the SO239 Ant Jack at the transceiver end. What's the big deal? It's how the Technician and General License class books show it, right?

Radio frequency (RF) current flows from the transmitter to the antenna via the center conductor of the coaxial cable, to the left pole (in the illustration) of the dipole and becomes a radio wave. This wave leaves the antenna and flows back into the opposite pole and to the interior side of the coax shield and back to the transmitter. Yes, the interior of the shield. This is due to the SKIN EFFECT phenomenon. Also, we wouldn't want the RF energy to escape the coax... would we?

The dipole is a balanced antenna which means that the current flowing in the two poles are supposed to be equal for it to radiate according to the diagrams in the books. For this to happen the current flow in the feed line conductors must be equal.

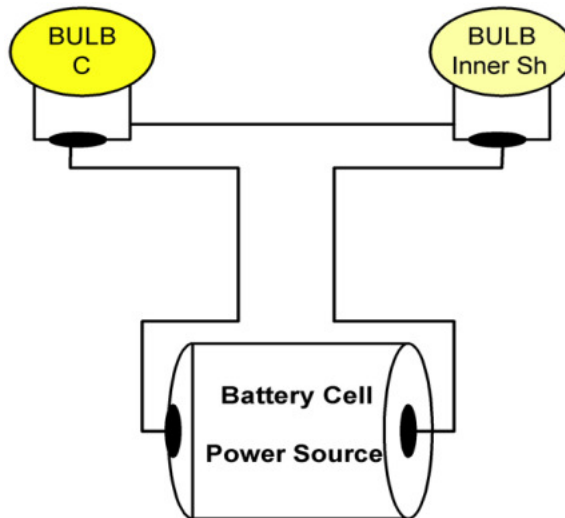


Fig X

Fig X hopefully illustrates what I am talking about. The L and R bulbs represent the two elements of the dipole antenna. They have the same current flow through both of them... so they not in Koyaanisqatsi... and they radiate (glow) equally. This is ideal... and you probably have guessed that I wouldn't be talking about Koyaanisqatsi if things were always good.

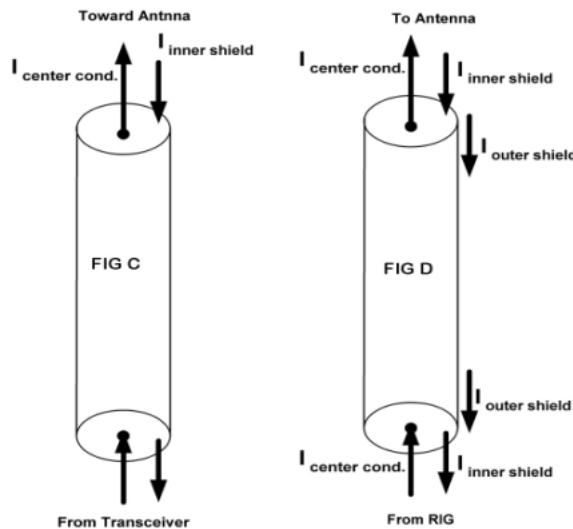


Fig C shows RF current flowing from the Rigion the center conductor of the coax and returning from the antenna on the inner part of the shield. Once again... this is ideal and what we hope to achieve. Fig D shows the problem that will occur with this antenna design... when the RF current flows at the point in the coax cable where the

outer shield meets the inner shield (next to the antenna elements) this RF current will divide and flow two ways: 1. Into the R element (in the illustration) that connects to the shield and 2. Into the exterior part of the coax shield.

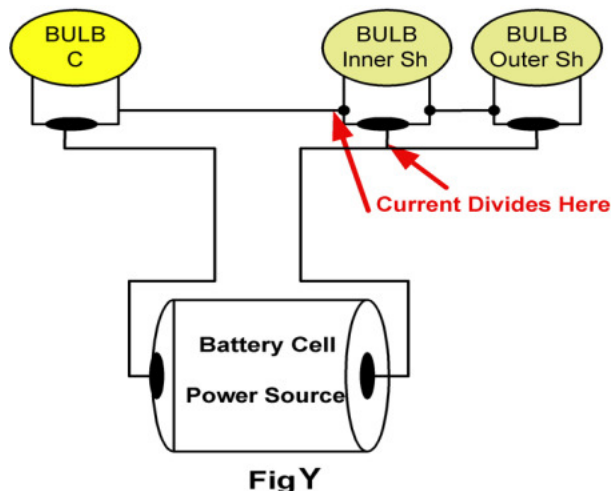


Fig Y

Fig Y shows the two bulbs that represent the two poles of the antenna...AND a third bulb which represents the outer part of the coax shield. Now the power that was intended for the center bulb (BULB Inner Sh) is being shared with the unwanted BULB which represents the Outer Shield of the coax feed line. You guessed it... the poles of the dipole are no longer balanced... and since RF current is flowing on the outer shield of the feed line it is now radiating RF energy.

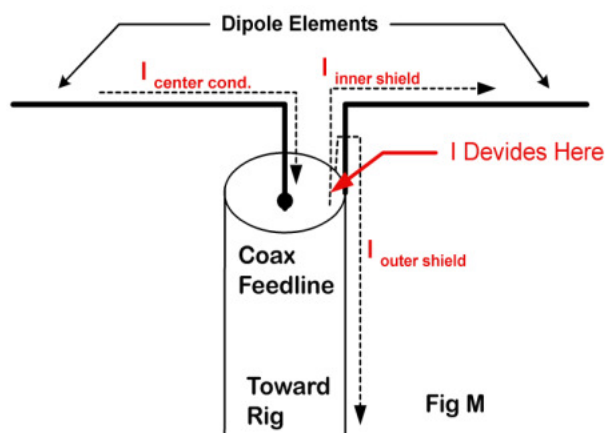


Fig M reiterates the Koyanishqatsi effect as describe above. Now that we have RF energy being radiated by the coax feed line's shield... a number of unwanted things will occur:

1. The dipole's pattern of radiation is altered since the current in the two elements are not equal.

radiating right down into your shack. The theory sez the voltage is highest at the end of the radiating element. If the source of RF energy is the center of the antenna, the radiating element is the coax shield, the end of this element is in your shack. Even if your rig is grounded... this path contains RF energy- probably high voltage. Do your computer speakers have that mushy Donald Duck sound when you operate SSB on 20 meters? Does your phone ring when you transmit? Does your YL's pretty touch lamp blink off/on?

3. Another antenna theory says that antennas are **RECIPROCATIVE**... which means that they receive as well as they transmit. If you now have RF in your shack when you transmit... then when you are receiving you can count on picking up your PC's power supply radiation, your internet router/cable modem, your new plasma TV, compact fluorescent lamps, etc. This 'man made noise' is everywhere in your house. The outer shield of the coax receives the garbage signals from your house and takes it up the feed line where it is sent into the feed point. This noise then travels down the inside of the coax right into your receiver to over power desired signals.

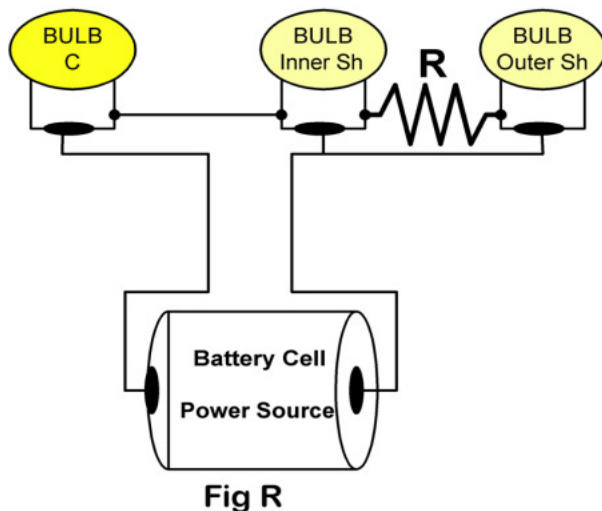


Fig R

How do we stop the feed line outer shield from emitting RFI and picking up noise? We can accomplish this by creating a high impedance (Hi Z) path between the feed point (where the inner shield and the center of the coax attach to the two poles of the dipole) and the outer shield of the coax. If there is a Hi Z path inserted at this point... then little or no RF current can flow down the outer coax shield. Fig R illustrates

adding a Hi Z path in series with the light bulb that represents the coax outer shield... Note that resistor R is in series with **BULB Outer Sh**. If R's value is high enough... then very little current will flow into **BULB Outer Sh**. Almost all of the current in that path will flow into **BULB Inner Sh** and Koyaanisqatsi will cease.

To prevent current from flowing down the outer shield of the coax feed line so it will not radiate when the rig transmits we need to install a Radio Frequency Choke (RFC) in series with the feed point and the outer shield of the coax.

Jerry Sevik's book on baluns states that in order to have the needed Hi Z choking action to isolate the inner shield from the outer shield... the choke's inductive reactance (X_L) needs to be at least 10 times the impedance of the circuit. Since the center of the self resonant dipole's Z is about 72 ohms then the needed X_L at the lowest operating frequency should be approx 720 ohms. Amateur Extra students... get your book and do the math: $X_L = 2 \pi f L$.

Enter the choke balun: A choke balun can be made out of a length of coax cable wound in a coil to produce enough inductance to create the needed X_L . This inductance is created on the outer shield of the choke coil. The center conductor and the inner shield of the coax choke operate just like a length of feed line. There is hardly any loss of transmitted power from the rig to the dipole's feed point through this coil of coax.

There is an article on the internet that has a diagram of making a choke coil that fits this bill. It consists of at least 21 feet of RG-58 (for low power) or RG-8 (for high power) uniformly wound on a 3 or 4 inch form. I built this design and placed it in series with the coax feed from my rig to my Icom AH-4 antenna tuner that was mounted about 35 feet away outside. Fig U abstractly illustrates this.

An amazing thing happened... no more RF in the shack when I transmitted... Pat's bedside phone stopped ringing when I worked 80 meters, no more "Donald Duck" in my PC speakers, and I lost weight. Koyaanisqatsi had been conquered... equal RF energy flowing on the inside of the coax feed line and none on the outside!

The next amazing thing was that my receive

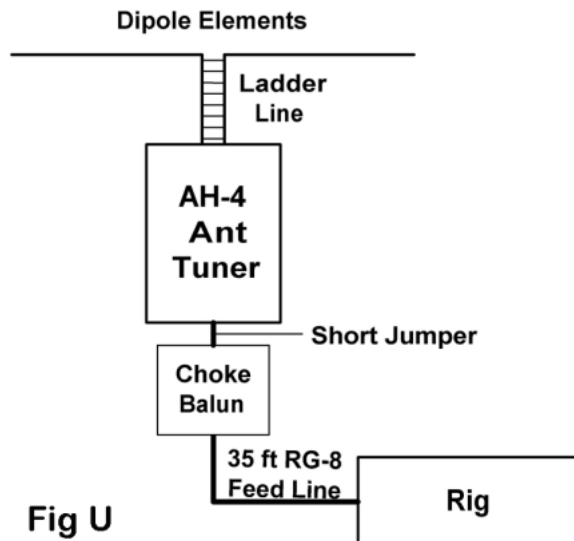


Fig U

noise on 160 meters dropped from 10 dB over S-9 to S4. Now... it seems that the man made noise coming from the modern day electronic gizmos in my shack were not making it through the choke to the feed point of my antenna and not ending up in my rig's receiver.

Fig 9 shows how I made the 21 feet of coax choke coil and it's placement on my AH-4 tuner. The coax is secured to a peanut butter jar (PBJ) with good quality electrical tape. The coil is mounted away from the metal mast with 3/4 inch schedule 20 irrigation pipe stand-offs and secured with cable ties. Pretty easy but not very permanent (what ham has permanently mounted equipment?).

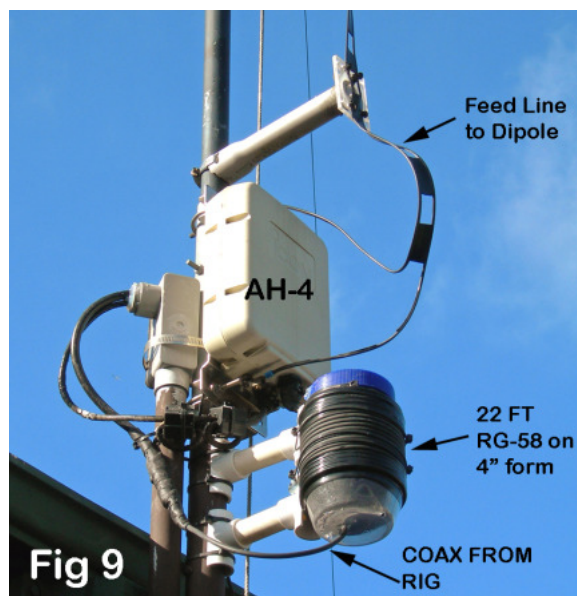
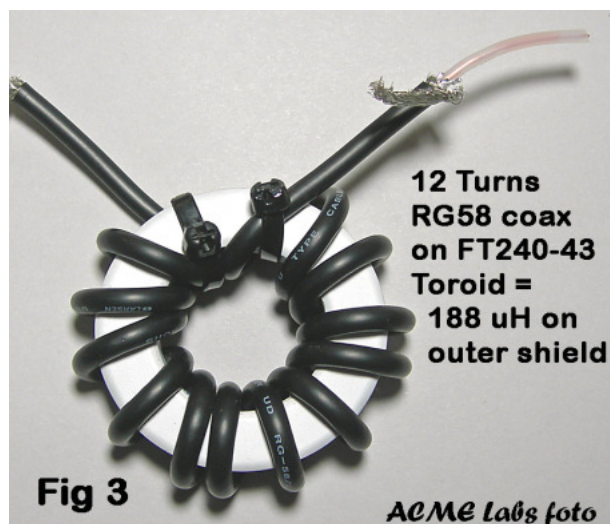


Fig 9

Radio Club of Tacoma

Please note that my AH-4 installation had other issues that will be mentioned in detail in another article... but the key issue is that the PBJ choke cleared up RFI in my shack by choking off RF at the antenna system's feed point. If you placed one of these gizmos at the center of your self resonant dipole it would tune up better (not tuning the third leg- the outer shield), you'd have little or no RF in your shack, and the radiation pattern would be as designed.

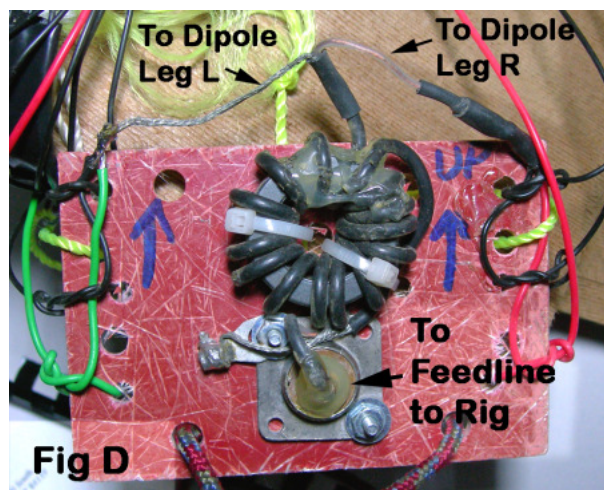
But that thing is pretty ugly... is there anything else that will ensure no Koyaanisqatsi in my antenna system... but will not attract humming birds? You betcha, Joe...



Enter the choke balun wound on the toroid. Take a look at Fig 3. It uses a 2.4 inch outside diameter mix 43 toroid with a bunch of turns of RG58 coax. The 12 turns of coax equals about 3 ft in length... so there will be less loss in the feed line's path. This choke balun uses the toroid to increase the coiled up outer shield's inductance. In fact... the 22 ft of coax on the peanut butter jar measured to be 90 uH. The 12 turns on the toroid measures to be 188 uH. Double the uH in 1/7 the coax length. Note: it is important to use the mix 43 for this design due to it's choking ability.

Take a look at Fig D. This shows the choke balun integrated into the center insulator of a multi band fan inverted Vee/dipole that WW7LW used at last years Salmon Run contest. Chuck and I received many complements on how well our 90 watt signal was covering the whole state on 75 meters. Notice the 1 inch toroid with the many turns of

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RG174 mini coax cable. One end connects to the SO-239 jack that the feed line attaches to. The other end connects to the L and R legs of the multi element Vee. No Koyaanisqatsi = big signal.

Lets back up a page and do some of the math: The PBJ choke of 22 ft of coax measured inductance was approx 90 uH. Plug that number into the formula ($X_L = 2 \pi f L$) and your lowest operating frequency of 3.5 MHz and I come up with 1978 ohms of X_L . This is way more choking than needed according to Jerry's book on baluns. The toroid choke balun in Fig 3 will have twice as much X_L which should work great!

So readers... if my experiences sound similar to yours at your ham station... please take it upon yourself to try what I did with choke baluns. I don't think you will be disappointed.

FYI... Visit the website that shows the 21 ft coax as a choke balun: Google 'Ugly Balun'. I get my toroids from the Toroid King... simply Google 'Toroid King'. W8DIZ is good to do business with. If you don't want to build your own choke balun but want to purchase one... one our club members, Bill AD7QI, makes them in his shop and has them for sale at a reasonable price.

Kudos... A tip of the hat to you, Bill AD7QI, for inspiring me to do further research on this subject after attending your presentation on baluns at the radio club meeting a few months ago. Also, thanks to you Bruce WE7P, for assisting me to find the correct truth regarding this issue on the world wide web.

Regards... Rich KR7W

-30-

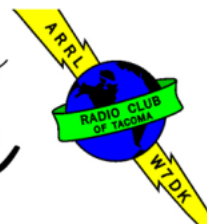
Happy Birthday

June

Day	Name	Call	RCT Number
1	Bill Childers	KD7NJV	2124
1	Roy Myers	W A7UZL	696
2	Kurt Hunter	W 7KMH	2336
3	Crystal Quamme	KF7BAK	2418
4	Roddy Noltén	KE7JQU	2321
5	Rich Prior	W A7RP	2421
7	Dennis Brinegar	W 7GEN	2393
7	Nick Winter	K7MO	640
10	Garfield Klinger	KC7LZL	2053
12	Harry Adams	W 7HSA	2275
12	Willard Barth	W A7LRQ	2262
13	Angela Poore	KC7EQ	883
14	Bob Pensworth	KC7HIR	1962
14	Thomas Murphy	N7QHX	1370
14	William Jonez	AB7W J	2049
16	Jay Leatham	KD7DKY	2035
17	Jim Lawrence	N7RHX	2306
18	Ron Wood	KE7W PV	2397
19	Brian Terjeson		1688
20	Bob Osborne	KC7ZLH	1999
20	Roger Holme	KE7EMV	2248
21	Don Hatlestad	K7OG	2296
21	Roger Nace	K8RN	406
22	Geoff Apgar	W 7JEZ	892
23	George Wood	KA7HGE	2058
23	Harry Howell	KB7W YO	1957
23	Mark Rader	KC7AFO	1662
24	Shirley Murphy	N7QHW	1371
25	Grace Teitzel	AD7S	827
25	Lou Metz	KC7VUM	1977
27	Jackie Johnson	K7JAS	2385
27	Norm Hoppe	K7DCN	1735
28	Bob Hewlett	N7NCP	1316



The Radio Club of Tacoma's
Logger's Bark



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Radio Club Repeaters

Central Tacoma: 147.280 + PL=103.5 *Central Tacoma Packet:* 144.970

Crawford Mountain (SE Thurston County): 147.380 + PL=103.5

Central Tacoma: 440.625 + PL=103.5

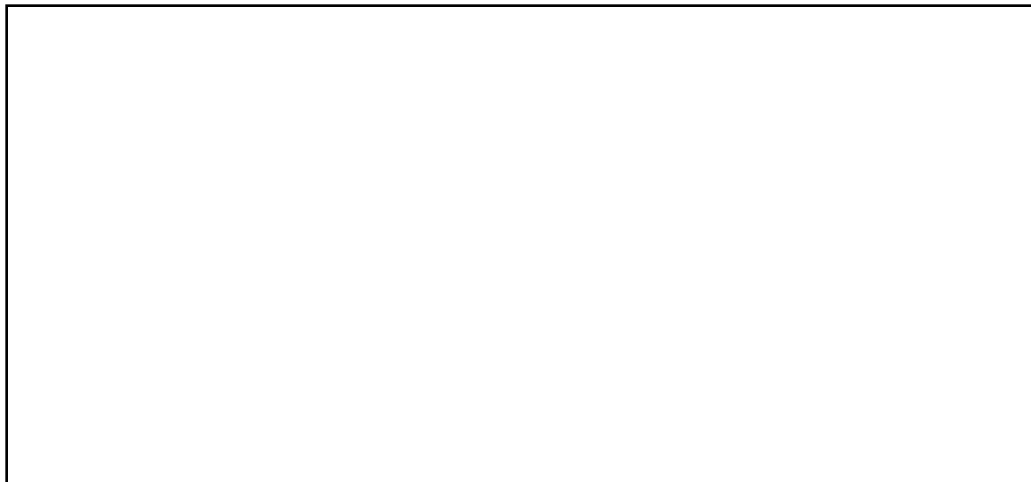
The Loggers Bark

Radio Club of Tacoma, INC.

PO Box 11188

Tacoma, WA 98411

To RCT Member:



JUNE 2009 EVENTS

CLUB MEETINGS: Wednesdays June 10th and 24th at the Library Administration Building 112th and Waller Road. The club meets at 7:30 PM. Everyone is invited to attend.

Board Meeting: Wednesday June 3rd, 7:00 PM at the RCT clubhouse. All members are/were welcome.

Bark Deadline: Last week-end of each month. Please submit articles by that time!

Support our club: Attend meetings, volunteer, Elmer!

Check into the weekly two meter net: Tuesdays at 7:30 PM on the club repeater on 147.280 MHz.

Check into the weekly 10 meter net: Sundays at 8:00 PM on 28.375 MHz.